Embracing the GenAI Revolution: Identifying Use Cases, Piloting Solutions, and Achieving Production Success

Generative AI is poised to bring a revolutionary transformation to how businesses operate. While GenAI offers remarkable potential, it is not a silver bullet for all organisational challenges. To harness its power effectively, organisations must identify the right problems and apply the most suitable solutions.

Categories of GenAI Use Cases

GenAI is causing a massive wave across almost every industry, and this is causing significant confusion for organisations embarking on a data journey. Many of the use cases organisations identify to address data challenges can be categorised into three main groups. Having a clear understanding of which solution to apply to your problem will enable you to efficiently classify and prioritise them.

1. Generative AI Solutions

Creation	GenAI can generate a wide range of content, from text and images to code and designs.
Summarisation	It can distil lengthy documents and data into concise summaries.
Discovery	GenAI can uncover hidden insights and patterns within datasets.
Automation	It can automate repetitive tasks and workflows, increasing efficiency and productivity.

2. AI / ML Solutions

Classification	AI / ML can classify data, making it easier to organise and manage.
Prediction	It can provide predictive analytics, aiding in decision-making and forecasting.

3. Data Engineering & Automation

Integration	Data engineering and automation can seamlessly integrate with existing data platforms and systems.
Workflow	It can streamline and automate various data-related processes.
Data processing	Pre and post process integrated data to uncover hidden insights and patterns within datasets.

Maturity in GenAI

Maturity in GenAI is intrinsically linked to an organisation's data platform. Having the right data to feed into AI models helps mitigate hallucinations and improves the explainability of AI-driven decisions. To truly reap the benefits of GenAI, it must be integrated into business workflows and end-to-end processes.

GenAI Security

When implementing GenAI, governance and security should be paramount. Choosing an enterprise-ready platform is crucial to safeguard your data, intellectual property, and ethical considerations.

It is important to ensure that:

- Your data remains under your control and is not used to train other models.
- The intellectual property generated through GenAI remains exclusively yours.
- You have a clear lineage and the ability to explain the outputs of your models.
- Your GenAI models adhere to ethical and responsible practices.

AI

Identifying Good Starting Points for GenAI

To determine where GenAI can make the most significant impact, organisations should consider the following questions:

1. Where are employees spending most of their time on repetitive tasks that could be automated?
2. Are there processes that are standardised but not automated, involving repetitive steps or questions?
3. Which areas of the business possess large information bases capabilities?
4. Would an incorrect response or hallucination from a GenAI model have a significant impact on operations?
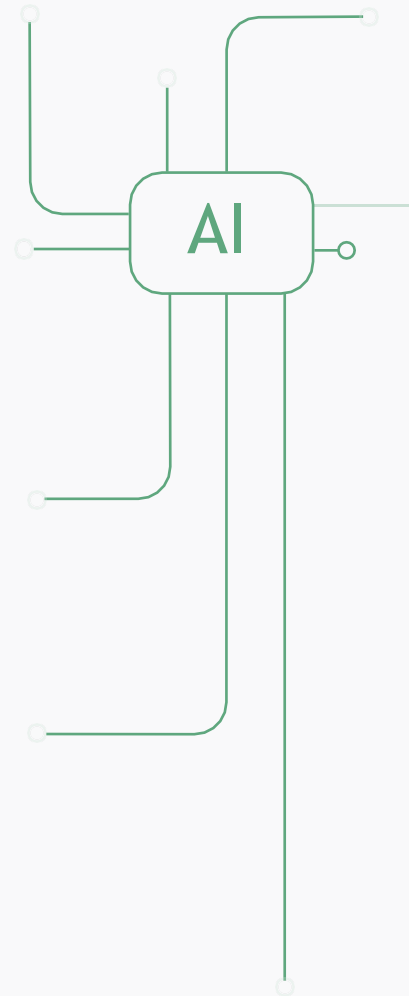
Moving AI Solutions to Production

Transitioning AI use cases to production is a critical step to ensure value is delivered to the business as we find many AI solutions are piloted and then discarded. Productionaisation involves a streamlined approach for operationalising Machine Learning pipelines, ensuring that AI solutions are seamlessly integrated into the business operations, maintained, and continuously improved. The key steps involve:

Use Case Identification

Identify the specific use cases where GenAI can make a meaningful impact on your organisation's operations.

Data Analysis, Cleansing, Transformation, Validation

Thoroughly analyse and prepare your data to ensure it's clean, relevant, and suitable for model training.

Model Testing/ Training

Train and validate your models using high-quality data, fine-tuning them for optimal performance. Tuning GenAI models has some nuance when compared to traditional AI models with a focus on prompt engineering and finetuning.

Data Governance Overlays

Implement robust data governance practices to maintain data quality, integrity, and compliance throughout the model lifecycle.

Model Serving (Workflow & Process Integration)

Integrate AI models into your existing workflows and processes, ensuring seamless interaction and automation.

Monitoring, Logging & Alerting

Continuously monitor model performance, track usage, and set up alerting mechanisms to quickly respond to any anomalies.

Security & Compliance

Prioritise data security and compliance with industry regulations and internal policies.

Incident Response & Remediation

Establish a response plan to address and rectify issues or unexpected model behaviour, ensuring minimal disruption to operations.

Use cases:

Retail
Customer Service & Support Automation

Service customers requests for information and service provisioning automatically including triage and straight through processing.

Retail
Content Discovery / Recommendations

Effectively find the most relevant Products / Content listings from an inventory catalogue.

Retail
Customer Sentiment Analysis

Automated process of discovering and measuring how customers feel about your product, brand, or service and providing targeted recommendations to address.

Retail
Product Design & Development

Market opportunity identification and product development to increase revenue generation.

Retail
Inventory Management & Optimisation

Optimising stock levels via demand and supply prediction and understanding to reduce oversupply and and reduce logistics costs.

Banking & Fin Services
Regulatory Compliance

Interpret regulatory policy/documents to identify potential violations relative to operating procedures.

Banking & Fin Services
Fraud Detection

Analyse transactions and customer behaviour to detect and act on anomalies and reduce risk.

Banking & Fin Services
Credit Assessment

Identify and process clients ability and rating when providing credit services including interrogating multiple data sources.

Banking & Fin Services
Personalised Marketing / Service

Personalise content and services based on customer behaviour and requirements to optimise sales and service delivery.

Telecomms
Network optimisation

Balancing customer demand and network capacity through the use of monitoring and predictive forecasting to provide competitive services.

Telecomms
Demand Forecasting

Dynamic demand forecasting to assist with network planning and optimisation.

Cross Industry
Content Generation

Empower creative teams to create bespoke images and creative content for campaigns and editorial content.

Cross Industry
Code Generation /
Developer Efficiency

Complete and augment code to make your engineering team more efficient and effective.

Cross Industry
Business Process
Automation

Automating the information retrieval and recommendation steps of recurring business processes.

Cross Industry
Document Search
and Synthesis

Effectively find the most relevant documents and summarise their contents.

Cross Industry
Virtual Assistant

Automate administration heavy tasks with a natural language powered virtual assistant (meeting notes, setting up meetings, follow ups etc).

About intelia

intelia, an Australian owned data consultancy, connects you to your data to drive understanding, develop leading-edge insights and apply intelligent automation to transform the way you do business.

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